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DIABETES MELLITUS AND GALL BLADDER DISEASE

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It is estimated that 4,000,000 people in the present population will have diabetes mellitus. The disease is increasing in incidence, being in tenth place as a cause of death in the United States. Many predisposing factors to this disease are known, one of the most prominent of which is gall bladder pathology. It is known that 38% of diabetics have cholelithiasis associated with their diabetes or have had it as a predisposing cause.

THE ANATOMICAL RELATIONSHIP

The anatomy of the two organs is closely linked together. The gall bladder is lodged in a fossa on the under surface of the right lobe of the liver, and extends from near the right extremity of the porta to the anterior border of the organ. It is part of the excretory apparatus of the liver and a reservoir for bile holding from 30-35 cc. The cystic duct is 4 cm. long and joins with the hepatic duct to form the common bile duct. This latter duct is 7.5 cm. long and opens into the duodenum just below its middle. At its termination it lies for a short distance along the right side of the terminal part of the pancreatic duct and joins with it in the mucous and muscular coats of the duodenum to form a common opening. Sometimes a common channel is present, the pancreatic and common bile ducts uniting to form an ampulla at a point ahead of their entrance into the duodenum. In 1901 Opie¹ discovered an impacted stone at the ampulla of Vater, and was able to force bile into the duct of Wirsung by applying pressure to the gall bladder; thus a common channel may be created. Mehnenn² dissected at autopsy 449 specimens and found the two ducts to be joined above a common sphincter in 61%, thus permitting a reflux of bile or pancreatic juice.

The lymphatics of the lower portion of the

common duct enter glands near the head of the pancreas, but they do not enter the pancreas unless disease of these organs causes adherence to each other. Barron³ states that the islets are noticeable for their intimate relation with the lymphatics.

Acute pancreatitis is known to be quite commonly associated with gall bladder disease. In Duncan's⁴ opinion diabetes following acute pancreatitis would be more commonly known if it were not for the high mortality of the latter condition. He concludes that there is no doubt that biliary tract infection predisposes to diabetes in individuals with a diabetic diathesis. According to Shumacker⁵ 3 to 10% of patients surviving an attack of acute pancreatitis develop diabetes.

Stevenson⁶ quotes Barron in pointing out the similarity between the degeneration which occurs in the pancreas following experimental ligation of the ducts and the blocking of the ducts by gall stones. Pancreatic stones may play a part. Haggard and Kirtley⁷ divide pancreatic stones into two varieties, the first being the true pancreatic stone found in the duct and the second being the so-called false stones found in the parenchyma of the pancreas probably resulting from pancreatitis secondary to diseases of the gall bladder. However, in their series of cases of pancreatic lithiasis, gall stones were present in only 13.8%. It seemed improbable in the Banting era that simple obstruction of the pancreatic duct with stones would produce diabetes because Arnzon and Vaillard⁸ ligated the pancreatic ducts, as also did Ssobolew,⁹ and found that the islets were relatively intact despite a gradual atrophy and sclerosis of the rest of the organ. However, it has been shown since that the islets share to a minor degree the degeneration which takes place in the rest of the gland, and that a duct-tied gland contains less insulin than a normal gland. Loeper and Biay¹⁰ report the unusual case of a young man with glycosuria who found an irregular stone not

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shown by x-ray in his stool twenty-four hours after a crisis of pain. He had no further attacks and his urine remained sugar free thereafter. Capparelli¹¹ in 1883 is given credit for the first operation for the removal of pancreatic calculi. A persistent fistula and diabetes followed from which the patient died. Changes in carbohydrate metabolism are frequently associated with pancreatic lithiasis according to Jaleski,¹² and in a review Lazarus¹³ finds that disturbance in carbohydrate metabolism occurs in 45% of pancreatic lithiasis.

THE PHYSIOLOGICAL RELATIONSHIP

The physiology of the gall bladder and pancreas is linked by a common purpose, that is the digestion of food in the intestinal tract. Adjacent to the gall bladder is that great organ, the liver, which is closely associated with and affected by disease of the bile reservoir. Adjacent to the external secretory portion of the pancreas are the islands of carbohydrate regulation containing insulin. As pancreatitis may affect the delicate islet tissue, so also may disease of the gall bladder disturb liver function. The presence of gall stones may result in serious damage to liver function. The impairment in glucose tolerance and the lack of uniformity in glucose tolerance curves in gall bladder disease may be due to this concomitant liver damage. Soskin and Allweiss¹⁴ state that when the liver becomes damaged by toxic agents it becomes sluggish and the diabetic type of tolerance curve results. This change in tolerance is due to the impairment of the responsiveness of the hepatic homeostatic control of the blood sugar. Decreased inhibition of glycogenolysis is then present.

It is therefore questionable in many cases of gall bladder disease whether the decreased tolerance to carbohydrate is due to hepatic or insular disease. The hepatic type in contrast to the true diabetic type of hyperglycemia may be reversible. Soskin¹⁵ and his co-workers have been able to distinguish between these two types of decreased glucose tolerance by an intravenous glucose tolerance test. They find that the normal curve returns to the preinjection level in sixty minutes; the hepatic curve returns after sixty minutes but before one hundred twenty minutes; and the diabetic curve returns after one hundred twenty min-

utes. These two different types of curves draw our attention to the work of Taub¹⁶ et al, in which they find that the hyperglycemia occurring late in life usually in obese individuals can be treated without insulin with no increase in symptoms over a long period of time. Many cases in their series show spontaneous remission of the glycosuria for no apparent cause. These facts lead them to take the stand that the large majority of individuals developing hyperglycemia after the third decade are suffering from liver damage rather than from insulin deficiency. These findings also tend to support Graham's¹⁷ view that there are two main causes of diabetes. In one the b cells are damaged and produce very little insulin. In the other the b cells are normal but owing to the presence of an interfering substance, fail to produce enough insulin, though the capacity for production is great.

Coller and Jackson¹⁸ describe three patients with hypoglycemia which they regard as due to liver damage arising from gall bladder disease. Following operation a return to normal dextrose tolerance was obtained. These two writers believe that long standing gall bladder disease may bring about important changes in carbohydrate metabolism, and on this basis urge early operation. Improvement following surgery is gradual rather than dramatic as when pancreatic adenomata are removed. Marble¹⁹ quotes Ohler saying that gall bladder disease and cirrhosis of the liver are the two commonest non-diabetic diseases associated with abnormal dextrose tolerance curves.

The following conclusions are drawn by Taub, Schlaes and Rice²⁰:

- (a) the liver is the organ responsible for regulating the blood sugar.
- (b) disturbances in liver function may cause alteration in carbohydrate regulation.
- (c) Many of the patients have a history of excessive ingestion of alcohol with a poor diet.
- (d) most show evidence in their blood chemistry of sub-clinical liver damage. Most of their cases of this type were treated with a high carbohydrate, high protein and low fat diet without insulin. They all showed a pro-

nounced improvement in their diabetic symptoms.

The association of gall bladder disease and obesity leads many clinicians to think that the obesity causes the primary disturbance in metabolism. It is Sindoni's²¹ statement that fair, fat and forty apply to both diseases. He calls attention to the fact that 87% of diabetics were obese at the onset of the disease. Meakins²² thinks that obesity causes the primary disturbance in metabolism. He writes that hypercholesterolemia associated with the obesity leads to gall bladder disease, gall stones and extension of the infection into the pancreatic duct, sub-acute pancreatitis and finally diabetes. In other words there is a primary disturbance in fat metabolism.

Davidson²³ in discussing the mechanism underlying the production of gall stones agrees that the large amounts of cholesterol present in many types of gall stones might suggest that the etiology of cholelithiasis is closely connected with the metabolism of cholesterol. He draws attention to the important role which bile salts play in keeping cholesterol in solution. Any factor which adversely affects the cholesterol-bile salt ratio will facilitate precipitation. The functional integrity of the polygonal cells of the liver which manufacture the bile salts is obviously of prime importance. If hepatic function is lowered by infection or a defective diet, the bile salt manufacture may be decreased. The bile acids aid in the emulsification and absorption of fats and increase the effect of the fat splitting enzyme lipase. Teeter²⁴ remarks that they also serve to lower the surface tension of fats so that they lend themselves more readily to emulsification. The absence of bile from the intestine hinders the absorption of fat soluble vitamins.

Although pancreatic lipase is active in the absence of bile acids, its activity is increased three-fold in the presence of bile. Bile acids prevent the precipitation of cholesterol and fatty acids in the gall bladder by holding fatty acids in solution. Boyd²⁵ leans to the same view. He says that the increased prevalence of gall stones in the diabetic over the non-diabetic is the result of the metabolic disturbance in fat metabolism, that the etiology of diabetes is not related to gall bladder disease by any anatomical route, but is initiated by

the imbalance in fat metabolism, the liver playing the most important part. Saying that the absorption and oxidation of fats are unimpaired in diabetes mellitus, Kolmer²⁶ goes on to claim that the lipemia and cholesterolemia which are often present in diabetes appear to indicate an increased demand for the metabolism of fat because of the unavailability of carbohydrate. Carbohydrate is the chief anti-ketogenic foodstuff. In Soskin's²⁷ view if the glycogen of the liver is depleted the fat may fill the space no longer occupied by the glycogen. Dragstedt²⁸ thinks that the fatty and poorly functioning liver in diabetes is due to lipocaeic deficiency. He quotes Grayzel and Radwin in telling of the decrease in the size of the liver in three young diabetic children by the administration of lipocaeic.

Soskin²⁹ and his co-workers found that damage to the liver by a toxic-agent produces diabetic dextrose tolerance curves. Biskind³⁰ and Schreier claim that nutritional factors, especially those of the vitamin B complex, protect the liver from the functional and structural impairment which results from a variety of toxic agents. They also claim that it has been shown that this hepatic impairment results from a secondarily-induced deficiency of the nutritional factors which are used up in the process of destroying the toxic agent. It might be deduced from their theories that the removal of the gall bladder to relieve the strain on the liver from the cholecystitis or cholelithiasis should therefore be probably considered in diabetes.

THE STATISTICAL RELATIONSHIP

The statistical relationship between gall bladder disease and diabetes mellitus has been brought out especially by Rabinowitch³¹ who found by using the theorem of probability of Pearl that nine times as many patients with disease of the gall bladder had diabetes as would be expected if the influencing factors were independent. In other words a common factor seems to bring them together. 80% of all cases with symptoms of cholelithiasis have hyperglycemia, though not of sufficient degree to produce glycosuria. 30 out of 136 patients with gall bladder disease have glycosuria in Berghausen's³² studies. He advises operation for those suffering from repeated gall bladder attacks. In some few cases with re-

peated gall bladder drainage carbohydrate tolerance improves. At the Mayo clinic, Adams³³ says that 1 out of 47 patients with gall bladder disease has diabetes and 1 out of 8 with diabetes has gall bladder disease. All these cases were over forty years of age and the type of diabetes was mild. It was improved by operation in 20 to 25% of cases.

Wilder³⁴ reports 58 necropsies on diabetic patients. He finds cholelithiasis in 16 and cholecystitis in 4, or an incidence of 34.5% of gall bladder disease with diabetes. In discussing the pathology of diabetes mellitus, Warren³⁵ reports on 453 diabetics over thirty years of age who came to autopsy: 139 had cholelithiasis, 28 cholecystitis, and 1 carcinoma of the gall bladder. Most of the stones were of the cholesterol type. Cholesterol stones are 2.5 times as common in women as in men and 80% are in married women with children. Warren concludes that cholecystectomy should be performed on all patients with gall bladder disease and diabetes. Whether the gall stones of the silent type as described by Robertson³⁶ should be removed is another question. The average age at diagnosis of cholelithiasis in 189 cases was 47.7 years, and of the diabetes in 199 cases was 51.3 years. Bailey³⁷ reports these figures, and claims that they show a definite but not marked precedence of gall stones. A case of cholecystitis, cholelithiasis and jaundice whose daily requirement was from 600-1000 units of insulin before operation, has been reported by Joslin.³⁸ After cholecystectomy the insulin requirement dropped to 18 units per diem in 3 months and 9 months later the patient was feeling quite well without insulin. Jordan³⁹ makes the following conclusion regarding gall bladder disease: "The incidence of gall bladder disease discovered during life in diabetes is only a fraction of the incidence at post mortem examination."

THE IMPORTANCE OF THE POST-PRANDIAL BLOOD SUGAR

In two cases in our clinic with normal fasting blood sugars and gall bladder disease, Exton-Rose glucose tolerance tests were abnormal showing evidence of decreased carbohydrate tolerance. However, since the tolerance test puts an abnormal strain upon the homeostatic mechanism, it might be more practical and certainly more natural to administer a

meal tolerance test as suggested by Sindoni.⁴⁰ He states that blood sugar levels of a normal person after an average breakfast reveal little difference as compared with the fasting blood sugar, but the blood levels of the diabetic after the test meal become markedly elevated. He says that the fasting blood sugar is not a complete index of the diabetic's metabolic power for carbohydrate, and may often be misleading when it is the sole laboratory guide of the diabetic's progress. It may also result in a missed diagnosis. In his conclusion he says that one to three hours, generally two hours, after an adequate meal is the interval of choice for determining the blood sugar.

SUMMARY

A review is made of the literature concerning the association of gall bladder disease and diabetes mellitus. An attempt is made to correlate the anatomical, physiological and statistical relationships of each disease. The importance of post-prandial blood sugar in the diagnosis of decreased carbohydrate tolerance in gall bladder disease is emphasized.

CONCLUSIONS

1. Gall bladder disease and diabetes mellitus are closely associated with each other in the human body. 38% of diabetics have gall bladder disease. Nine times as many patients with disease of the gall bladder have diabetes as would be found if the influencing factors were independent.
2. The diabetes or perhaps better stated decreased carbohydrate tolerance may not be a true insular one. It may be due to liver disturbance from the toxic effect of the cholecytic disease, that is to derangement of the homeostatic control of the blood sugar.
3. To improve the function of the liver in these cases may therefore be the aim of the clinician. This may be done by high carbohydrate, high protein diet, correction of deficiency in essential food factors, reduction in weight if obese and perhaps removal of the bladder.
4. All diabetics should have gall bladder study.
5. Post-prandial blood sugar should be routinely used in all gall bladder disease.

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MESENTERIC FIBROSARCOMA*

Report of a Case

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Fibrosarcoma of the mesentery may be considered a unique surgical lesion because of its exceedingly uncommon occurrence. The clinical picture it presents, the surgical difficulty attending its removal, and the pathologic identification are of no less interest than its source and development. The etiological factors concerned in the production of mesenteric tumors remain largely conjectural and unquestionably a certain number of them may be explained on the basis of congenital defect in the development of the mesentery. In its advanced stage, the origin of the tumor is admittedly difficult to determine; whether it arises from the leaves of the mesentery or from the retroperitoneal space. The most important thing of course, is to determine malignancy. The following case report with operative and necropsy findings, illustrates this type of tumor.

CASE REPORT

H. H., male, age 66, white, married, was admitted to St. Francis Hospital on February 20, 1947, with chief complaints of abdominal mass, pain in the left lower quadrant, and loss of weight. For the last three years the patient had been having attacks of abdominal pain, gnawing in character and usually localized over the left iliac and hypogastric regions. When severe, it radiated to the back and to the thighs. The pain was worse after he ate a heavy meal, drank cold water, and when in sitting and lying positions. The pain seemed relieved when he walked about or passed gas by rectum. During the past three weeks, the pains became more frequent and intense in character. There was no history of anorexia, nausea or vomiting; no diarrhea, acholic stools, or jaundice. There was an increasing constipation and the history that he was treated by a gastroenterologist about two years ago for colitis and constipation. At that time, he weighed 168 lbs.; and just before admission, 130 lbs. He kept on working as assistant fireman until a week before he consulted one of

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us because he felt a tender mass over the left lower abdomen.

Physical Examination. A fairly well developed but poorly nourished male patient with no signs of marked anemia. The heart and lungs were negative. Blood pressure, 124/76. The abdomen was bulging and over the right hypochondrium and extending across the epigastrium was a mass with nodular surface, roughed edged, which moved on respiration. Over the left iliac region and extending obliquely downwards to the middle of the hypogastrium, was a large sausage-shaped mass, smooth surfaced and tender. The superficial abdominal vessels were predominant, tortuous, and engorged. Fluctuation wave and shifting area of dullness were present.

The working diagnosis was an intra-abdominal neoplasm in the vicinity of the sigmoid colon or an inflammatory diverticular tumor.

Laboratory Data on Admission. Hemoglobin, 64%; red cell count, 3,390,000; leukocyte count, 7,800 with 76% poly's, 20% lymphocytes, 2% eosinophiles, 2% monocytes. Urine analysis was essentially normal. Serum protein, 6.8 gms. per 100 cc.; blood sugar, 70 mgms. Urea nitrogen, 20 mgms. Sedimentation time, 40 minutes. Sedimentation index, 35 minutes. Blood Kolmer and Kahn were negative.

X-Ray Findings:* Barium enema was done before admission to the hospital and the report was as follows: "The rectum fills well. There is a point of obstruction in the lower sigmoid colon beyond which the barium could only be forced through slowly. This area of blockage is just beneath the large tender mass in the lower left quadrant. The lumen could not be visualized in this area. Very little barium could be forced beyond the obstruction. Serial films were taken and all showed non-filling of the same part of the lower sigmoid colon for a length of 5 cm. There is no sharp outline of the unfilled area but the mucosal pattern can be demonstrated in one or two views. Film taken after elimination shows complete emptying of the lower bowel. The mucosal membrane is intact and appears normal. There are no evidences of diverticulosis. Diagnosis: There is a constant area of

non-filling in the midsigmoid region measuring 5 cm. in length with suggestion of mucosal pattern which did not give the appearance of a colon lesion, but more the appearance of an extrinsic lesion causing a pressure defect on the colon."

Operation: Exploratory laparotomy was deemed indicated and carried out on February 24, 1947, under continuous spinal anesthesia. The abdomen was opened through left lower transrectus incision and a large irregular solid tumor mass was found occupying the entire pelvis and left lower abdomen. The tumor appeared lobulated with a conglomeration of nodules varying in size from 4 to 10 cm. in diameter and covered by a smooth glistening membrane which was highly vascular. The nodules were found to be made up of pale yellow and grayish friable material. The tumor mass was densely adherent to the sigmoid and apparently causing obstruction, as the upper sigmoid was partially collapsed. Because of the size of the tumor it was impossible to determine the origin except that it was attached to the mesentery of the sigmoid. There was no evidence of peritoneal implants nor metastasis involving mesenteric lymph nodes. The liver was enlarged and filled with metastatic nodules varying in size from 1 to 5 cm. in diameter. The pelvic tumor was deemed unresectable but an attempt was made to remove by enucleation the greater portion of the mass away from the bowel for the purpose of biopsy. Considerable bleeding was encountered which could not be controlled by suture ligature on account of the friable tissue. Concavity of the remaining tumor mass was firmly packed with voluminous quantity of plain gauze, using it as a drain and isolating this area from the rest of the bowel with thin rubber tissue dam. A palliative transverse colostomy was carried out to relieve obstruction.

Postoperative Course: The patient stood the operation well and seemed better the following day. The abdomen was soft and, except for slight postoperative pain, the patient appeared comfortable. On the third day, he developed definite signs of ileus which did not yield satisfactorily to Wagensteen decompression. The temperature started to rise and the abdomen became distended. On the

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sixth postoperative day, he developed rales in the chest with rapidly forming pulmonary edema. He became comatose and finally expired on the eighth postoperative day.

Biopsy Report:* "Gross specimen consisted of 250 grams soft, pale yellow-gray tissue. Microscopic: irregularly interlacing strands of small elongated cells strongly resembling fibroblasts. The nuclei of these cells vary in size and shape with many mitotic figures. The cytoplasm stains bright red. The stroma consists of thin-walled blood vessels. Diagnosis: Mesenteric fibrosarcoma."

Autopsy Findings:* "Peritoneal cavity: There was no evidence of infection. A large irregular tumor mass fills the pelvis and the liver projects well below costal margin due to enlargement with tumor masses. The other viscera are normally arranged. The liver was twice normal size due to many discrete round tumor nodules throughout. This ranged in size from minute masses to 5 cm. in diameter and are uniformly opaque-gray in color and moderately firm and resilient in consistency. The gall bladder and stomach are normal. The upper two-thirds of the small intestine is greatly distended with fluid material which is interpreted as paralytic ileus. The transverse colostomy is in a satisfactory condition. A lobulated gray tumor mass like the tumor nodules in the liver and like the surgical specimen removed a few days before, occupies a large portion of the pelvic cavity but is easily delivered from the pelvis. It is attached to the mesentery of the sigmoid from which it apparently arose. The sigmoid is closely adherent to the tumor mass, but there is no evidence that the intestine is invaded by the tumor. One mesenteric lymph node is calcified and the other nodes examined are moderately edematous. All other organs are essentially normal."

Histopathologic Studies:* "The tumor masses in the liver and in the pelvis are identical with the surgical specimen submitted earlier. The lung alveoli are filled with edema fluid with numerous foci of polymorphonuclear exudate extending from the bronchial branches to the surrounding alveoli."

* By Dr. Douglas M. Gay, Pathologist, St. Francis Hospital.

COMMENTS

Fibrosarcoma or spindle cell sarcoma is a tumor closely resembling sarcoma in gross appearance but differing from the latter in its great rapidity of growth, its greater size, and its tendency to invade neighboring tissues. This type of neoplasm is not sharply demarcated but fades imperceptibly into its surroundings as has been clearly demonstrated in the above case. It is much more cellular than a fibroma and usually forms comparatively little collagenous tissue; however, the invasive tendency is less marked and it does not metastasize as early as the round-cell variety.

DISCUSSION

The absence of peritoneal implants and metastasis to the mesenteric lymph nodes indicates spread of embolic cells to the liver through the portal circulation, with no evidences of further involvement elsewhere in the lungs or other viscera. The extent and invasive character of the tumor mass was so great that no delineating mark separates the tumor from the bowel. It was interesting to note that outside the pressure effect on the sigmoid there were no evidences of invasion through the wall of the bowel. From the clinical standpoint, the appearance of the patient belied the extent of the rapidly growing sarcoma, with exception of loss of weight. Cachexia and pronounced anemia was absent. The patient was not disabled for any length of time except a week before admission to the hospital, during which period his complaints were explained by obstructive and pressure symptoms in the lower bowel.

SUMMARY

A case of mesenteric fibrosarcoma is presented in its clinical, operative, and pathological aspects. The primary source of the lesion was not easily determined because of the size of the tumor and the advanced stage of malignancy. The diagnosis is not so difficult if, in the presence of an abdominal mass extrinsic to the gastro-intestinal tract, the possibility of mesenteric tumor is borne in mind. Malignancy of this type is unresectable and clearly indicates unfavorable outlook, with or without operative procedure.

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METASTATIC CARCINOMA of the LUNG* SIMULATING HEART FAILURE

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We present a case of metastatic carcinoma of the lung which masqueraded as a heart failure case because of its rarity and its misleading presenting signs and symptoms.

Carcinoma may reach the lung from the breast. It usually uses the lymphatic system, although at times it makes use of the blood stream. When it spreads by the lymphatic system the peribronchial lymph glands may contain masses of tumor cells. Sometimes no tumors are found in the substance of the lung, but great numbers of minute nodules may be lodged subpleurally.

In attempting to trace the spread of the cells from the breast to distant places, one should always keep in mind the principles of circuitous or retrograde metastasis. That is to say, cells, fluid, and bacteria, once the lymph channels of a part have become diseased, may have to resort to anastomotic channels and detours to arrive at their destination. By keeping this principle in mind, many of the features of metastases become less mysterious.

CASE HISTORY

M. G., married, white, female, 75 years old, admitted to St. Francis Hospital on December 21, 1946, with the chief complaints of palpitation, dyspnea, and chest pains. For about one year before admission the patient had been having recurrent attacks of palpitation, dyspnea, chest pains, and occasionally orthopnea, especially after some exertion. She had also noticed swelling of the feet at night.

Past Diseases. About 1½ years before admission, she had been operated upon for carcinoma of the left breast; this was corroborated by histopathological studies of the removed organ.

Physical examination revealed a fairly well developed and fairly well nourished, dyspneic patient requiring a back rest. Other pertinent findings were: left artificial eye; left mastectomy scar; a firm mass about 5 cm. in diameter in the right axilla. Except for occasional mucous rales at the bases, the lungs were clear and resonant all over; the heart was enlarged

downwards and to the left by percussion, no thrill was appreciated, heart sounds were regular, rhythmical, and fairly strong, while a soft blowing systolic murmur was best heard at the mitral area and was transmitted to the axilla and to the precordium. The abdomen was symmetrically bulging, fluctuating wave and shifting area of dullness were present, but the liver and spleen were not palpable; no abdominal masses, rigidity or tenderness. The lower extremities revealed pitting on pressure. The blood pressure was 180/110.

With the above history and findings, a working diagnosis of heart failure, secondary to chronic valvulitis, mitral insufficiency, probably rheumatic in the origin, was entertained.

Course in the Wards. Afebrile most of the time, with terminal rise of temperature. Breathing improved up to January 4, 1947, when the dyspnea again set in and gradually grew worse in spite of oxygen, respiratory stimulants and back rest. However, the lungs showed no rales and there was no change in the heart findings except for weakening of the heart sounds. On January 4 she also developed a puffy left lower eyelid, which persisted until she died. Water balance—output always less than input. She died on January 14, 1947.

Laboratory Studies. Dec. 23, RBC 4,530,000; 79% hemoglobin (Sahli); WBC 11,600, with 70% polys and 30% lymphocytes.

Dec. 24, Blood Wassermann negative; blood urea nitrogen, 18 mg.%; blood sugar, 135 mg. %.

Dec. 26, RBC 4,580,000, with 79% hemoglobin (Sahli); WBC 9,250 with 79% polys, 23% lymphocytes, 2% eosinophiles and 1% basophiles.

Dec. 30, Exton-Rose Test—Fasting blood sugar 95; 1 hour later, 130 mg.%; 2 hours later, 145 mg.%; and 3 hours later, 150 mg. %.

X-ray Studies. Dec. 22, 1946. Flat plate of the chest shows no enlargement of the cardiae shadow. There is a flocculent infiltration involving the lung fields on both sides; this extends into the lung parenchyma. Some free fluid is seen at the right base extending up the lateral chest wall. This probably represents passive congestion, although some superimposed infection should be considered.

Dec. 27, 1946: Fluoroscopic examination of

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** Intern, St. Francis Hospital.

the chest showed a broadening of the mediastinum. This was due, however, to a unfolding of the aortic arch since in the oblique views the arch was not broadened. The diaphragms were movable but the excursion was limited. There is still some opacity at the right base. No abnormal pulsations were noted. The cardio-thoracic ratio is 14-25½ which would appear to be greater than normal. The film, however, was not made on complete inspiration and the heart is transverse in type.

Electro-cardiographic Examination on Dec. 23, 1946, revealed a definitely abnormal tracing indicative of severe myocardial damage. The tracing is typical of extreme left ventricular strain and in addition the absence of the R spikes in the chest leads suggests definite coronary disease. There is no evidence of an acute myocardial infarction. First degree AV block is present. There is one extrasystole in lead 1, probably nodal in origin.

Medications. Purodigin, thiamin hydrochloride, elixir benerva, caffeine sodium benzoate, oxygen, nembutal, phenobarbital, demerol, salyrgan, mercupurine, agarol, mineral oil, agarol with phenolphthalein, paregoric, tincture belladonna, ammonia chloride, chloral hydrate, and low sodium-acid ash diet.

Autopsy Findings, as reported by Douglas M. Gay, M. D.—

Peritoneal cavity. The surfaces are studded with innumerable minute firm gray nodules of tumor averaging 0.5 cm. in diameter. There are surprisingly few adhesions and no free fluid. The organs are normally arranged.

Pleural Cavities. The parietal pleura on the left is smooth and glistening, but the visceral pleura is studded with minute tumor nodules. The right pleural surfaces are extensively involved in cancer with adherence of the entire lung surface to the chest wall. The mediastinum appears to be shifted toward the right due to fibrosis accompanying the tumor.

Lungs. The left lung contains numerous subpleural small tumor masses, but no metastases are grossly visible within the lung substance. The tissue is soft and ereditant and on section reveals a normal mottled pale red and black surface. The right lung is much decreased in size due to extensive involvement of all surfaces by cancer and dense fibrous tissue. The lung is air-containing, and shows no other cancer than that invading from

the pleural surfaces. The tracheo-bronchial nodes on this side are enlarged up to 2 cm. in diameter.

Pericardial cavity. The pericardial wall contains several firm gray tumor nodules. There are no adhesions or excess of free fluid.

Heart: Moderately enlarged due to hypertrophy of the left ventricle. The epicardium is thin and transparent. The myocardium is homogeneous dull red in color, firm in consistency and moderately thickened in the left ventricle. There is no evidence of infarction or fibrosis. The endocardium is thin and transparent except over the aortic valve where the valve ring is calcified. The coronary arteries contain numerous deposits of calcium and narrowing of the lumen, but there is no evidence of occlusion. The tricuspid, pulmonary and mitral valves are normal. The calcification at the base of the aortic valve does not extend to the valve edge, and the valve is judged to have been competent.

Gastro-intestinal tract. The surfaces are extensively covered with tumor masses, but there is no evidence of obstruction and the tract appears otherwise grossly normal throughout.

Lymph nodes: Axillary nodes on the right are represented by a mass of dense, firm gray tumor. Parasternal nodes on the right are involved in tumor. Tracheo-bronchia nodules on the right are also involved.

Other organs, essentially normal.

Histopathological Studies — Breast: Section from right breast is typical of breast cancer. The tumor cells are small, but vary in size and shape. There are occasional mitotic figures. The tumor cells are arranged in small strands and imperfect glands are found among a dense connective tissue stroma. Strands of tumor extend into the surrounding fat tissue and are also present in the lymphatics.

Lung and Pleura: Structure is identical with the breast cancer. The tumor extends into the underlying lung tissue and is also involving the peribronchial lymphatics.

Peritoneum: Section shows masses of cancer similar to that in the breast although there is much less stroma.

CONCLUSION

A case is cited of metastatic carcinoma of the right lung, secondary to carcinoma of the right breast, masquerading as heart failure.

SUCCESSFUL IMMUNIZATION PROCEDURES

GEORGE J. BOINES, M. D.,^{*}
Wilmington, Del.

Preventive medicine is of great importance when practiced early and systematically. Morbidity and mortality from diphtheria, whooping cough, scarlet fever, measles, and typhoid are still too prevalent in Delaware, especially in Wilmington. It is up to the medical profession and the public health agencies to assume the leadership in educating parents and guardians of children to see that every infant and child receives the full protection of all available methods of immunization.

The incidence of diphtheria, whooping cough, scarlet fever, and typhoid has been rising in the past several years. The spread of these communicable diseases cannot be effectively controlled by quarantine methods now in general use. The morbidity and mortality from these diseases can be successfully reduced by prompt action in reporting cases, testing the contacts, and employing thorough and systematic methods of active immunization.

To carry out the many tests, to interpret them and to suggest immunization procedures, it is obvious that all the necessary information must be in the hands of an experienced group and that systematic procedures must be developed so that the work can be carried out with speed and accuracy. We explored the possibility of the City Board of Health undertaking this work in an immunization clinic to which patients may be referred for preventive care, but this was not found to be feasible.

It was decided to start immunization clinics, in cooperation with the Wilmington City Board of Health, in the Wilmington General Hospital and the Walnut Street Y. M. C. A. Through these clinics immunization will be made available to the indigent part of the population. These clinics will operate on the same basis as any other hospital clinic. The Health Department has agreed to supply all of the immunization materials, and nurses to assist the physician and keep the records. The nurses will visit all reported communicable disease patients and request the testing of all

* Chief, Department of Communicable Diseases and Director of Immunization Clinics, St. Francis Hospital.

contacts, immunizing those found susceptible. This procedure should eliminate many contact infections provided physician cooperation can be obtained.

PROCEDURE OF SKIN TESTING

In order to facilitate the method of testing, the following procedure is under trial in the immunization clinic. The left forearm is used for the Dick test, near the elbow, and the Schick test is placed near the wrist.

The right upper forearm is used for the tuberculin test and the lower right forearm for the whooping cough skin test. The tuberculin and the whooping cough skin test give similar reactions in that they both depend on induration rather than redness for their interpretation. If there is no induration at all, they are both negative. The patient returns for the reading of the tests in 24 and 48 hours. Immunization is started as soon as susceptibility is evident.

The purpose of the tuberculin test is that of ease finding in children, as well as among

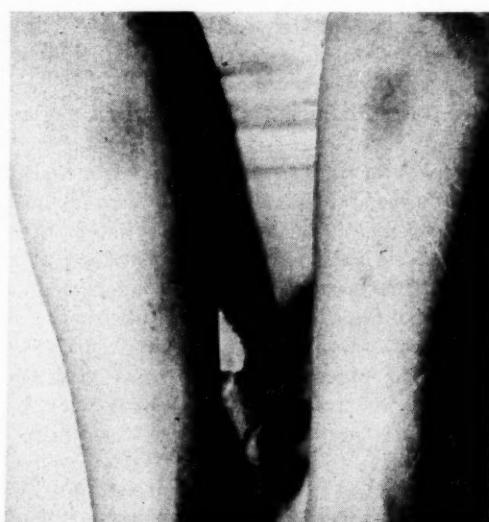


FIGURE I

Left forearm shows a positive Dick above and a negative Schick below (point of needle shows). Right forearm shows positive tuberculin test above and negative Schick control below. (Done on all nurses when the Schick is read in 24 hours).

hospital personnel. All contacts are tested every 6 months if negative. All positive reactors are x-rayed.

TUBERCULOSIS

TUBERCULIN TEST:

Injection should be made intracutaneously on the flexor surface of the right forearm, about two inches below the elbow, the site of injection being first cleansed with 95% alcohol or acetone. If the injection is made correctly a small white bleb will rise over the needle point. Care should be taken to avoid injecting tuberculin subcutaneously. If this occurs no local reaction will be seen, but a general febrile reaction may result.

In order to avoid severe reactions, the tuberculin test is carried out with doses of two strengths—First and Second Test Strengths.

In children with visible cervical nodes, ulcerations, or discharging sinuses, and others who may be highly sensitive to tuberculin, the initial dose should be one-tenth of the First Strength Dose. If no reaction occurs, the First Test Strength may then be used.

First Test Strength: Inject intradermally 0.1 cc. from the first strength vial containing 0.00002 mg. of Tuberculin P. P. D. Readings should be taken after forty-eight hours.

Second Test Strength: If no reaction occurs following the first test, retest by injecting 0.1 cc. of the Second Test Strength. This dose contains 0.005 mg. of Tuberculin P. P. D., or 250 times the first strength dose. Read the reaction in forty-eight hours.

Caution: Since solutions containing small amounts of Tuberculin P. P. D. deteriorate on standing, only freshly prepared solutions should be used. If dilutions are stored at refrigerator temperatures when not in actual use, deterioration is less rapid. However, such solutions should not be used after storage for longer than three days.

Interpretations of Tuberculin Reaction: Reactions should be read forty-eight hours after injections. Positive reactions may be classed arbitrarily as follows:

One plus (+) —Reactions more than 5 mm. and not exceeding 10 mm. in diameter, showing some redness and definite edema.

Two plus (++) —Reactions more than 10 mm. but not exceeding 20 mm. in

diameter, with an area of redness and edema.

Three plus (+++) —Reactions exceeding 20 mm. in diameter with marked edema and redness.

Four plus (++++) —Reactions consisting of marked redness, edema, and an area of necrosis.

If there is no edema and only slight redness at the site of injection, the test is recorded as negative. In interpreting the tuberculin reaction, it must be remembered that redness is of less significance than edema. All positive reactors are fluoroscoped, or if suspicious, are x-rayed. All negative reactors are retested at 6 month intervals if possible; if not, at yearly intervals, and when found positive are x-rayed. A negative reactor who later becomes positive is watched carefully because the incidence of tuberculosis is much higher in this group within one year from the time of contact.

DIPHTHERIA

SCHICK TEST:

Each individual is tested by an intradermal injection of 0.1 cc. of diphtheria toxin on the left lower forearm. Care must be taken in each case to produce an intradermal wheal. The reading is made at 72 hours and the reaction recorded in centimeters in its longest diameter. All reactions of one centimeter and over are read as positive. All children with positive reactions receive a course of three monthly intramuscular injections of one cc. each of alum precipitated diphtheria toxoid. If over the age of twelve, in order to avoid reactions, fluid toxoid (Ramon) is used, giving 1 cc. per month for three months intramuscularly. Diphtheria, pertussis, tetanus toxoid (alum precipitated) may also be given, using a 1 cc. dose each month for three months. The Schick test is repeated 6 months after the last injection and those found positive are given additional injections.

Since the introduction of diphtheria toxoid for children, the use of toxin antitoxin has been put aside by many physicians. It has been found, however, that many adults do not tolerate toxoid and very painful local and gen-

eral reactions result. It is now recommended that the use of toxoid be limited to children up to 12 years of age, and that the diphtheria toxin antitoxin be used for all individuals over that age. Since the antitoxin used in the combination is prepared from sheep's blood, it reduces to a minimum the chance of subsequent inconvenience from reactions in case serums have to be given. This useful preparation has been discontinued by most manufacturers; for that reason, the fluid toxoid (Ramon) is recommended in its place.

Due to hypersensitiveness to proteins, there may be a redness and swelling at the site of injection and a general reaction with malaise and slight increase in temperature. These symptoms usually subside in 24 to 48 hours. Ten grains of aspirin and one capsule of $\frac{3}{8}$ grain of ephedrine sulfate will usually alleviate any uncomfortable symptoms.

WHOOPING COUGH

Factors Influencing Skin Test Reactions: The immunologic diagnostic test is manifested by two types of dermal allergy. The first depends upon the presence of circulating antibodies and results in a response within fifteen minutes after inoculation of the antigen, and usually disappears within one hour. The other type is caused by true tissue allergy and is always of a delayed nature with the response following a number of hours after injection of the antigen. Maximum intensity is reached after twenty-four hours and is manifested by induration, pain, and redness.

Principle: It is assumed that if antibodies are present in the blood stream and thereby presumably in the tissues, the injected antigen will incite an inflammatory reaction indicating the presence of protective substances.

Procedures and Interpretation of Skin Tests: One-tenth of one cc. of the agglutinogen is injected intradermally. Readings of the skin reaction are made thirty minutes and twenty-four hours after injection.

As has been indicated, two types of dermal response are anticipated: an immediate or wheal-like reaction and a delayed or tuberculin-like reaction. Induration is the determinant factor in a positive immune reaction to distinguish it from a negative result. Erythema alone does not merit consideration in the interpretation.

The following procedure for grading reactions is suggested:

1. Strongly positive—immune: an indurated area, with or without erythema, 20 mm. or more in diameter at either one-half or twenty-four hours or both.
2. Weakly positive—immune: an indurated area, with or without erythema, not exceeding 20 mm. in diameter at either one-half or twenty-four hours, but at least 10 mm. in diameter at either or both.
3. Negative—susceptible: no induration at either one-half or twenty-four hours beyond an area of 10 mm. diameter.

All reactions will fade quickly, usually disappearing in thirty-six hours or sooner. The pertussis skin test has been found reliable in determining the immunity index to whooping cough.

Immunization is employed as follows: For children from two to six months of age concentrated 20,000 million organism whooping cough vaccine is used; 0.5 cc. the first week, 1 cc. the second week, 1.5 cc. the third week, and 2 cc. the fourth week, hypodermically.

For children over six months of age, the vaccine is given 1 cc. the first week, 2 cc. the second week, and 3 cc. the third week, hypodermically.

Alum precipitated whooping cough toxoid may be used, giving 1 cc. per month for three months intramuscularly.

In order to avoid multiple injections with many trips to the office, the alum precipitated triple toxoid (diphtheria, pertussis and tetanus) has become very popular and effective, given 1 cc. per month for three months intramuscularly. Six months after the last injection a skin test is done and if negative susceptible, a booster dose of 1 cc. is given. A booster dose may also be given on exposure to whooping cough or at two and six years of age if the skin test is weakly positive or negative susceptible.

SCARLET FEVER

DICK TEST:

The Dick test is done on the left upper forearm using 0.1 cc. of the scarlet fever toxin material. Before doing the test several precautions must be taken to insure uniform reactions. The arm is carefully washed with

sterile sponges and sterile solutions as follows: soap, alcohol, water and dry sponge; the alcohol is washed off by the sterile water to avoid any reaction of the alcohol with the toxin.

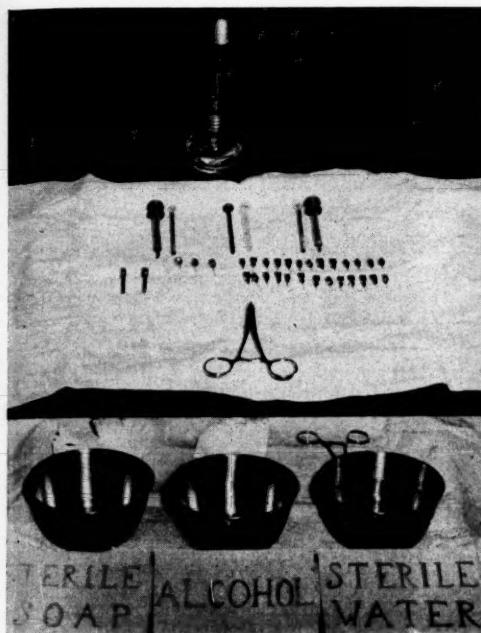


FIGURE II

Sterile soap, alcohol, and water used in preparing the forearm for the Dick test. Note hemostat used to pick up sterile sponges used in scrubbing the forearm. Separate intradermal needles may be used for each patient. If the platinum (left upper) needles are used, the flame is employed to sterilize the tip of the needle before each patient.

All syringes and needles are autoclaved in order to avoid the presence of water. The toxin vial is wiped with alcohol and dried with sterile sponge, then punctured with a sterile hypodermic needle when a large number of patients is tested at one time. Several syringes are filled at the same time so as to avoid multiple puncture of the vial and possible contamination. Regular toxin syringes are used.

Small special intradermal $\frac{1}{4}$ inch 26 or 27 gauge needles are employed. The sterilized syringe is rinsed out with a small amount of the skin test solution before filling it for use and each needle is rinsed out by ejecting 0.1 cc. of the skin test solution before making the test injection. Care is taken to produce a good sized wheal in the skin regardless of the amount used according to the graduations of

the syringe since at times some air leaks out of the needle or some air might be present in the syringe.

The tests are read between 20 and 24 hours and the reactions are measured in centimeters in their longest diameters. The present immunization doses are graduated as follows:

1st dose	650 skin test doses
2nd dose	2,500 skin test doses
3rd dose	10,000 skin test doses
4th dose	30,000 skin test doses
5th dose	100,000 skin test doses to 120,000

The intradermal method of immunization is used by employing 0.1 cc. of each of the five standard doses, that is 0.1 cc. of the first dose is injected intradermally on the outer surface of the arm; this is followed by 0.1 cc. of the second, third, fourth and fifth doses. If a severe reaction should occur in any individual, then one-half of the following dose is given at the next injection and this is followed by the next regular dose. The advantage of the intradermal method is the reactions are not at all severe and only an occasional individual complains of a sore arm or a slight elevation of temperature. Two weeks after the last immunization dose another Dick test is done, using 0.2 cc. on the left forearm. If this is positive, 0.1 cc. of the fifth dose is given and a retest is done again after two weeks. The outer arm is used for the immunization because the forearm is saved for the Dick test reaction. Immunization renders the skin immune locally and this may result in a negative Dick test due to local skin immunity when the patient may be actually susceptible.

TETANUS

For active immunization in children, use tetanus toxoid, 1 cc. per month for three months intramuscularly. The triple toxoid for diphtheria, tetanus and pertussis may be used if immunization for all three conditions is needed.

In the absence of adequate previous immunization with tetanus toxoid reinforced by another injection of toxoid at the time of injury, a person who has been wounded in such a way that there is danger from tetanus should receive a subcutaneous injection of tetanus antitoxin, 1,500 units, on the day of the injury.

A larger dose or a second injection within ten days may be desirable in certain cases of extensive injuries or when compound fractures are reduced.

SMALLPOX VACCINE

Smallpox vaccine is recommended at one year of age, seven years of age, and on exposure. Ether or acetone should be used to cleanse the skin, as alcohol may destroy the virus. The vaccine must be kept in the ice compartment of the refrigerator at all times. The multiple pressure method is used and no shield or bandage is applied; make the puncture area small ($\frac{1}{8}$) and as superficial as possible; it is not advisable to draw blood.

TYPHOID-PARATYPHOID A & B

Typhoid-paratyphoid vaccine is given subcutaneously, 0.5 cc. the first week, 1.0 cc. the second week, and 1.0 cc. the third week; or 0.1 cc. the first week, 0.2 cc. the second week, and 0.3 cc. the third week intradermally in the deltoid area. The intradermal method diminishes the reaction and is more effective in antibody production. A booster dose of 1.0 cc. or 0.2 cc. should be given every year or re-immunization may be done on exposure.

YELLOW FEVER

Yellow fever immunity is successfully conferred by giving a single dose of 1 cc. hypodermically.

ROCKY MOUNTAIN SPOTTED FEVER

Rocky Mountain spotted fever vaccine is used, giving 2 cc. hypodermically and repeating the same dose in two weeks. One dose of 2 cc. should be given every following year as a booster dose.

INFLUENZA

Influenza A and B vaccine is used giving 1 cc. hypodermically once. This lasts for one year. Allergy to egg albumen is a possible reason for allergic reaction since the chick embryo is used in the production of the vaccine.

MEASLES

No active immunity. Passive immunity is produced with immune globulin by giving 4 to 6 cc. intramuscularly to modify the disease when the symptoms have appeared and 6 to 10 cc. intramuscularly to prevent the disease if given within eight days of exposure.

Cholera, plague and typhus may also be prevented by immunization.

BOOK REVIEWS

An Integrated Practice of Medicine—A Complete General Practice of Medicine from Differential Diagnosis by Presenting Symptoms to Specific Management of the Patient. By Harold Thomas Hyman, M. D., Volumes I, II, III, and IV, and Index. Pp. 4131, with 1184 illustrations, 305 in color. 319 Differential Diagnostic Tables. Cloth. Price: \$50.00 per set. Philadelphia: W. B. Saunders Company, 1947.

This monumental work represents a new technique in medical literature. The 319 differential diagnostic tables, each listing the chief causes of a given symptom and then cross-referring the reader to the appropriate text, without duplication, leads to an "integration" of diagnosis and treatment quickly and accurately. The text is thoroughly up to date and the style makes reading easy. Special attention is paid to the asymptomatic or early stages of a condition.

The illustrations are well chosen and of good teaching value; the abundant color plates are superb. The key to the whole work is the Index and Signs and Symptoms volume.

The work is a complete general practice of medicine directed especially at the general practitioners of medicine. They—and the rest of us—can acquire this extensive work (it took five years for Hyman and his eight associates to prepare it) in full confidence that they will get their money's worth, and then some.

The Human Ear in Anatomical Transparency. By Stephen L. Polyak, M. D., Professor of Anatomy, University of Chicago; Delbert K. Judd, M. D., Assistant Professor of Otolaryngology, University of Chicago; and Gladys McHugh, Medical Illustrator, University of Chicago. Pp. 136, with 83 figures, mostly in color. Fabricoid. Price, \$10.50. New York: T. H. McKenna, Incorporated, 1946.

This is a unique presentation of the anatomical features of the auditory apparatus and of the organs of speech in the form of successive layers of transparencies which give the effect of pictorial dissections, with a lucid view of the relations of the various structures. Publication of the book was sponsored by the Sonotone Corporation as a contribution to a field in which they have long been interested.

This book should prove a valuable addition to medical literature because of the clarity and completeness with which the subject matter is presented and the beauty and excellence of the

illustrations. The book concludes with an excellent bibliography.

Trans-Vision Anatomy of Head Structures.
By Alfred Feinberg, Columbia University. Pp. 17, with 11 figures in color. Board. Price, \$1.00. Jersey City: Wernet Dental Mfg. Co., 1946.

This work is similar to the one above, except there is no text. The transparencies here too are excellent. Since it concerns the problems of oral prosthesis, the book will be of chief interest to oral surgeons and dentists.

Muscle Testing—Techniques of Manual Examination. By Lucille Daniels, M. A., Director and Associate Professor of Physical Therapy, Stanford University; Marian Williams, M. A., Assistant Professor of Physical Therapy, Stanford University; and Catherine Worthington, M. A., Director of Professional Education, National Foundation for Infantile Paralysis, Inc. Pp. 189, with 349 figures. Paper. Price, \$2.50. Philadelphia: W. B. Saunders Company, 1946.

This work, stemming from the examination and treatment of cases of poliomyelitis, is an excellent technical presentation of muscle topography, muscle function, joint range, and nerve distribution. The details of a technical examination and its proper evaluation are given. Only on the basis of such an examination can the correct physical medical treatment be prescribed and the results of that treatment be measured. This manual should be of great value not only to the physical therapists, and the general and orthopedic surgeons, but also all other physicians who take care of compensation, veterans and traumatic cases.

The Challenge of Polio. By Roland H. Berg. Pp. 208. Cloth. Price, \$2.50. New York: Dial Press, 1946.

This is the story of the researches and crusades against infantile paralysis, written for the layman in terms he can understand. Recommended as a good book for its purpose.

The Story of Human Birth. By Alan Frank Guttmacher, M. D., Associate Professor of Obstetrics, Johns Hopkins University. Pp. 214. Paper. Price, 25 cents. New York: Penguin Book, Incorporated, 1947.

This is an up-to-date revision of the text for

the layman published by the Viking Press in 1937 under the title "Into This Universe." Recommended as a good book for its purpose.

Medical Uses of Soap. Edited by Morris Fishbein, M. D. Pp. 195, with 41 illustrations. Cloth. Price, \$3.00. Philadelphia: J. B. Lippincott Company, 1946.

This is the second printing of this opus, with the addition of a new chapter on the surgical uses of soap. The first printing was reviewed in THE JOURNAL of February, 1945. Our opinion remains unchanged: "The book may be of interest to physicians, but its future probably depends more upon its appeal to the beauticians and similar artisans."

Animal Farm. By George Orwell. Pp. 118. Cloth. Price, \$1.75. New York: Harcourt, Brace & Company, 1946.

This book is considered by many to be the most effective allegory since Gulliver's Travels. The author is an English critic, essayist and novelist, with the subtle wit of his race, but his story fits into the American scene of the past fifteen years so perfectly that one would suspect he was an American, of strictly independent political ideas. He tellingly portrays the inevitable result of unrestrained bureaucracy and the methods and techniques of Godless government, wherever it may be. The Jones' farm could be America! Heartily recommended for any evening; just the thing for that overnight Pullman ride.

The veteran returning with tuberculosis places an added responsibility on the community. The incentive for many veterans to remain in their homes will constitute a menace to the public health. If we are to cope with this problem we must approach it with an understanding attitude. We must remember that although these veterans are the responsibility of the Government, they are also residents of the community, and, as such, are entitled to the same consideration as is given tuberculosis non-veterans. When the tuberculous veteran returns to his home community he presents a health problem that must be solved by that community.—William H. Hickerson, M. D., NTA Bull., Dec., 1945.

DR. WEST RESIGNS

The Board of Trustees of the American Medical Association announced on April 3rd the resignation of Olin West, M. D., of Nashville, Tenn., as President-Elect of the A. M. A. because of ill health. He is 72. Edward L. Bortz, M. D., of Philadelphia, who was elected Vice President at the June, 1946, meeting in San Francisco, succeeds to the office of President-Elect and will be inaugurated as President at the 1947 annual session in Atlantic City, June 9-13.

Dr. West, who served many years as Secretary and General Manager of the American Medical Association, tendered his resignation in a letter to R. L. Sensenich, M. D., of South Bend, Chairman of the Board of Trustees. The letter says:

"Because of continued and possibly permanent impairment of health, I feel compelled to submit to the Board of Trustees, through you as its Chairman, my resignation as President-Elect of the American Medical Association, to take effect immediately.

"I take this step with the greatest possible regret, because of having been signally honored by the action of the House of Delegates in electing me to this high office, as well as because of my devotion to the Association and to its ideals. It has been my most earnest desire and my strongest intention to do all that I could do to promote the great cause that the Association has served so well for nearly one hundred years. I sincerely hope that even as an humble member in the ranks I can make some small contribution toward the success of the very worthy aims of our great society.

"I am now firmly convinced that I cannot properly perform the duties of the President-Elect and, later, those imposed on the President and that, in all fairness to the Association, my resignation should be submitted and officially accepted.

"It now seems probable that I shall not be able to attend the Centennial Session to be held in Atlantic City, in which case I hope you, as Chairman of the Board of Trustees, will present my apologies for my failure in office. I hope that the House of Delegates will believe that 'the spirit was willing but the flesh was weak.'

"I have an abiding faith in the A. M. A. and

in the sincerity, integrity and soundness of judgment of those who have served and now are serving as members of its official bodies. May the richest of blessings come to all of them!"

In reporting Dr. Bortz's elevation to the office of President-Elect, the April 5 issue of *The Journal of the American Medical Association* says:

Dr. Bortz was born in Greensburg, Pa., Feb. 10, 1896. He received the A. B. degree from Harvard in 1920 and the degree of M. D. in 1923. Following his internship at the Lankenau Hospital from 1923 to 1925, he studied abroad at the University of Vienna and the University of Berlin during 1925-26 and gave further special attention to pathology at the Mayo Clinic and the University of Illinois Medical School. He then became instructor in the Department of Pathology at the University of Pennsylvania School of Medicine and the Graduate School of Medicine from 1930 to 1932.

He has been associate professor of medicine at the Graduate School of Medicine at the University of Pennsylvania since that time and also chief of Medical Service B at Lankenau Hospital. He has been director of the Philadelphia County Medical Society and chairman of its committee on public relations and was president in 1941. He has also been chairman of the Committee on Scientific Business of the College of Physicians of Philadelphia and chairman of the Committee for the Study of Pneumonia Control of the Pennsylvania State Medical Society.

Dr. Bortz has been a Fellow of the American College of Physicians since 1929 and received the certificate of the American Board of Internal Medicine in 1937. He has been assistant editor of the *Cyclopedia of Medicine* since 1929. In 1939 he received the Meritorious Service Medal for distinguished service to the commonwealth of Pennsylvania, the award being made by former Pennsylvania Governor George H. Earle. In 1943 he was presented with the Founders Medal of the Association of Military Surgeons for exceptional services rendered in connection with the arrangements for its assembly in Philadelphia. During World War II he was on active duty as lieu-

(Continued on Page 58)

+ Editorial +

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SECRETARY MUNSON RESIGNS

Under date of March 8, 1947, Dr. C. Leith Munson tendered to your President his resignation as Secretary of the Medical Society of Delaware. Previously, at the last meeting of the House of Delegates in Dover, October 8, 1946, Dr. Munson spoke plainly about the lack of interest and cooperation generally manifested by the members of the Society, in the hope that conditions would improve. Feeling now that this hope has not materialized, Dr. Munson tenders his resignation, effective immediately.

Your President regrets exceedingly this sudden turn of events and even more so the loss of Dr. Munson's ever-willing services. He has worked industriously and efficiently; he will be missed greatly.

To succeed Dr. Munson the President and Council have secured the services of Dr. John F. Hynes (M. D., Yale, 1930) whose work as the chairman of the Delaware Division, Amer-

ican Cancer Society has been outstanding. Now let every member do his share to assist his officers in making this year a banner year.

LET THEM EAT SAWDUST

To those thoughtful people who have observed the operation of government controls in the matter of meat and other food products, fuels, and housing, to go no further afield, we address this editorial.

Would you care to see the institution of American medicine, by which we mean medical education, hospitals, and medical practice, in a similar state of confusion?

It seems to us that the serious national post-war impairment of nonmedical services and supply, partly at least as a result of inept government controls, affords a warning that cannot be ignored.

The confusion and inept nature of governmental attempts at control of anything seem to reflect confused and inept thinking on the part of the people who have far too long permitted the establishment and expansion of the alphabetic agencies and their now well entrenched propaganda machines.

Propaganda, promises, and proscription produce no meat, build no houses, shelter no people, feed no invalids, warm no hospitals, mine no coal.

Will the people in their wisdom turn the control and direction of American medicine also over to the grasping alphabetic agencies of government? If they, the people, do this, if they subject the medical schools, the hospitals, the practice of medicine, the care of the sick to the cold, blundering, impersonal recklessness of government agencies in the manner that has been repeatedly proposed under the guise of "health insurance," they will do it in the face of such warning experience as the people of other countries have had but have disregarded. They will do it as well in indifference to the experience of other countries which have undergone such controls. They will do it against the best advice of the American medical profession.

Propaganda, promises, and proscription are, you will agree, no substitute for performance.

This is to indict no political administration or party but to state a fact. Yet, political control of medical institutions once established must subject them to such substitutions since, demonstrably, this is the fact wherever it has been tried. Is medicine motivated by selfish considerations in opposing political controls? Certainly. For modern medicine is built around scientific facts and principles. It deals with the lives of human beings, their medical emergencies, situations in which performance, immediate, skilled, and intelligent—not promises, propaganda, and/or proscription—is essential.

No thoughtful person will deny that when sick people are in need of medical service they need it usually *at once*, not later when it suits some bureaucrat's convenience to authorize it under regulation 297031—A46; when sick people need food they need it *now* and in kind and quantity ordered by a doctor, not promises of it sometime after a cabinet conference, three public hearings, authorization by four unions, and delay by six unauthorized strikes, with subsequent determination by endless fact-finding authorities that there is none to be had. Sick people? What are they but an aggregation of statistics for bureaucrats to juggle—let them eat sawdust.

Editorial, *N. Y. S. J. M.*, April 1, 1947

INFLUENZA—1789

Mrs. Henry Ridgely, of Dover, in going over a large collection of Ridgely letters, discovered the following one, which was forwarded to THE JOURNAL by Dr. Stanley Worden, of Dover. This letter was written by Ann Moore Ridgely from Eden Hill Farm, Dover, Kent County on Delaware, November 3, 1789, to her niece, Mrs. Cadwalader, while Willy Ridgely was at school at Mrs. Brodeau's, in Philadelphia. It is the earliest record of an influenza epidemic yet found in Delaware.

Nov. 3rd, 1789

I have just been informed that Philadelphia and Wilmington are both fully as much, or even more, unhealthy than this County—what shall I do about my Dear Child—My own family Thank God has escaped hitherto—but the Town and Country all round us is filled with this dreadful Influenza—can it attack the same person more than once? and are you sure

my Child and your dear Mother have had it? Let me know how you all do—I never heard of people's dying so fast in this neighborhood as at this time—a month or two ago it seemed as if all the Children* were to be taken away and now grown people go faster than they did—Don't let my Dear Willy see this letter—if Mrs. Brodeau's house is unhealthy pray let my child be removed to a healthy one if possible—I never shall begrudge any expense that can be an advantage to her—pray write to me and if my Dear Willy is well tell her to write by first opportunity—May God Almighty Bless and preserve you.

A. R.

* The death of children refers to a severe outbreak of measles in late summer, 1789.

WOMAN'S AUXILIARY

Haddon Hall will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the American Medical Association, which will be held in Atlantic City, New Jersey, June 9-13, 1947.

Requests for reservations should be sent immediately to Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City, New Jersey.

COINCIDENCE

Everybody seems to know that 1947 marks the centennial of the American Medical Association. Nobody seems to know that it also marks the centennial of Smith Brothers cough drops. One hundred years old, both are going strong.

DR. WEST RESIGNS

(Continued from Page 56)

tenant commander and later promoted to captain in the United States Navy, serving from January, 1942, through January, 1944. He was made a member of the Council on Scientific Assembly of the American Medical Association in 1942 and became its chairman in 1945. He is also chairman of the Committee on National Emergency Medical Service of the American Medical Association. He was a member of the House of Delegates in 1945.

Dr. Bortz has served the Association efficiently; to him may be assigned much of the credit for the arrangement of excellent programs in the General Scientific Meetings held during his membership on the Council on Scientific Assembly.

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